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VACCINE INDUCED SPECIFIC PROTECTION AGAINST ENTERIC RED MOUTH DISEASE (ERM) CAUSED BY *YERSINIA RUCKERI* SEROTYPE 1 BIOTYPE 2

Sidharta Deshmukh1[a], Martin K Raida[1], Inger Dalsgaard[2], Jiwan K Chettri[1] and K. Buchmann[1]

[1]Laboratory of Aquatic Pathobiology, Department of Veterinary Disease Biology, University of Copenhagen, Denmark. [2]National Veterinary Institute, Technical University of Denmark.

In European fish farms there is evidence of enteric red mouth disease (ERM) outbreaks in previously vaccinated farmed fish. It has been suggested that the occurrence of a *Yersinia ruckeri* variant (biotype 2) may explain this situation. Recent development of commercial vaccines has included both biotype 1 and 2. In this study, the specificity of immune protection extended by three commercial vaccines viz; AQUAVAC ERM® Intervet Schering Plough (based on biotype 1 only), ERMOGEN VET® Novartis (based on biotype 1 only) and AQUAVAC RELERA® Intervet Schering Plough (based on both biotype 1and 2) developed against ERM was investigated following intraperitoneal (IP) challenge with *Yersinia ruckeri* serotype1 biotype 2. Fish were immersion vaccinated for 30 s and challenged 2, 4 and 6 months post vaccination. The onset and severity of various pathological lesions along with their disappearance during the course of disease was also carried out to evaluate the protective index conferred by three different vaccines. After IP challenge, the overall best relative percentage survival was observed in AQUAVAC RELERA® followed by ERMOGEN VET® with least survival rates in AQUAVAC ERM® among all vaccinated groups. Interestingly a marginal better immune protection was observed between AQUAVAC RELERA® and ERMOGEN VET® vaccinated group during the last two challenge trial. The onset and severity of pathological lesions observed during challenge 2 (i.e. 4 month post vaccination) suggested a beneficial efficacy shown by AQUAVAC RELERA® in terms of milder and lesser degree of certain pathological lesions like haemorrhages in or around the buccal cavity, base of fins and intestines, when compared to ERMOGEN VET®, AQUAVAC ERM® vaccinated group and *Yersinia ruckeri* (BT2) infected group.